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Janet Campbell, Editor

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DATA SERVICES

The cover photograph of this month´s COMPUTERNEWS features the new Univac CADE 1900 Computer Assisted Data Entry System. It is located with UTCC´s Data Services Department at 215 Huron Street.

The hardware consists of CADE CPU, tape drive (9-track, 1600 BPI, 2400 foot reel), hard copy printer, 2 disk storages and 13 keystations.

The CADE Processor is a computer-controlled system which prepares data for entry into the user´s main data processing centre. The two major elements of the system are the keystation and the central unit. From the keystation, the operator will perform the four main activities: entering, verifying, modifying and updating data. All work is entered at the keystation under control of the computer program, which contains special instructions that direct the system and determine what actions are allowable as the data is keyed into the system. It also governs the messages that appear on the video screen of each keystation.

Data is entered under the control of a particular program and is processed on the basis of files, records, batches and data files. After processing, the data is stored on magnetic disk; when all batches of single jobs have been entered and verified, they may be transferred to a magnetic tape or to a dataset on the S/370-158-3 or to the S/370-165-II.

The following are some of the CADE Processor´s features and capabilities:

1. 32 Active Levels per Program
2. Record Size to 999 Characters
3. From 1 to 99 Fields per Record
4. Up to 120 Characters Storable in Character and Auxiliary Duplication Registers
5. Output Tape Data Conversions (None, Packed Hexadecimal, S/360-65 Packed Decimal, Binary, BCD, EBCDIC, USASCII)

By making use of technological advances in computing, Data Services is able to supply an efficient, comprehensive data entry service to the University community. We welcome any potential users of our Data Services to view this installation and will assist in preparing jobs for data entry on our system. Anyone interested in arranging services please contact Mrs. Vera Cabanus (phone 978-5040). All present users interested in details of our system should contact the Supervisor of the keypunch section, Ms. Zelda Anderson (phone 978-5273).

Vera Cabanus

FREE COMPUTING

That´s right! UTCC is offering a month of free interactive computing to celebrate the grand opening of the DEC 1060. The installation of the DEC 1060 is progressing smoothly and we estimate that February will be the month during which free computing will be made available.

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FREE COMPUTING cont´d

The month of free computing is not the only bonus in store for our users. In order to encourage the use of the DEC 1060, substantial discounts will still be provided once the first month of operation has expired.

I´m sure you are thinking, "It would be great to take advantage of the month of free computing, but what am I supposed to use for a terminal?". This problem is in the process of being solved (refer to the article, NEW TERMINALS, in this COMPUTERNEWS issue).

About the product itself, for those of you who don´t know what the DEC 10 is, I won´t bore you with details about the operating system, versions of software, etc. - it should suffice to say that forms of FORTRAN, BASIC, PL/1, COBOL, ASSEMBLER, APL, and so on will be available. The DEC 10 is a general purpose, time-sharing machine designed for speed and ease of use. A couple of pluses - one phone number gets you into any language processor, and there is no JCL required to execute a job.

As you have probably noticed, UTCC is quite excited about this product. We feel this system will fulfill a need that, quite frankly, has not been adequately attended to by the Computer Centre before. Down the road - we are beginning to look at typesetting and databases, two new and attractive applications. Information on this and other aspects of the DEC 10 System will be made available through future COMPUTERNEWS articles. As well, this information will be posted on sheets called "DEC Notes". In the meantime, don´t hesitate to contact your Customer Services Representative or myself at 978-6021.

Bill Foster

MVS PHASE ONE COMPLETED

UTCC´s Phase One development and testing of MVS 3.7 with JES4.1 for the S/370-165-II will be completed on Friday, December 9. As well, USER TEST 7 will take place on this date. On Friday evening, from 6:30 to midnight, the user community is invited to take advantage of the free coffee, donuts, and computing offered by UTCC. All services will be available on the system. Those wishing to participate must hold valid SACs or HSACs. Further details will be made available via HOTNEWS and posted signs.

System Reliability/Maintenance

Since the beginning of the MVS 3.7 installation project, 113 system problems have been brought to the attention of IBM. Of these problems, some were known problems, some were found to be UTCC´s problems, and some were newly discovered problems.

cont´d...

MVS PHASE ONE cont´d

Of the 31 outstanding problems, 22 are awaiting resolution by IBM and 7 require further documentation by UTCC. Approximately one half of these problems significantly affect the individual user or the whole system.

The base system has been upgraded with the inclusion of:

SU16 Scheduler/IOS consolidation
SU33 Dump Improvements

In addition, an IOGEN has been carried out in order to accommodate the new device configuration at EAT.

MVS Phase Two

During the implementation of Phase Two, User Tests will be scheduled during regular production times. An IBM utility will be used to transfer jobs from MVT to MVS (and vice versa). Provisions will be made to allow the user to specify the system required. If this specification is not essential to run a job, the job will be run on the system currently in use at the time of execution. Phase Two will be completed when MVS charging rates have been determined and when the determined rates have been passed to the accounts receivable system.

Walter Berndl

NEW TERMINALS

With the installation of the DEC 1060 system, there will be an increased demand for interactive computing and low speed terminals at the University of Toronto. Approximately thirty new terminals will be purchased by UTCC and placed in public terminal areas early in the new year to meet the increased demand.

Terminals will be made available to users in the following locations:

Burton Tower
Engineering Annex
Erindale College
Scarborough College
Sidney Smith Hall

The exact number and type of terminals to be installed at each location has not been completely resolved, but more information will be made available in the next issue of COMPUTERNEWS.

The new terminals are being purchased in bulk; therefore, the Computer Centre is receiving them at a reduced price. If anyone in the University community is interested in purchasing a terminal at the reduced rate, please contact Kurtis Bishop at 978-6133 for more information.

Ralph Lombardi

STATUS REPORT ON THE ENGINEERING ANNEX TERMINAL

At the end of October, the main computer terminal in the Sandford Fleming Building was moved to new quarters on the main floor of the Engineering Annex Building. The terminal name has been changed to Engineering Annex Terminal (EAT) to reflect the new location. After some initial startup problems, computing services at EAT have stabilized. GOULD service has returned to normal and a reliable self-service reader has been installed in the terminal after numerous problems with the Documation 6501 reader (see article entitled CARD READERS AND THE ENGINEERING ANNEX TERMINAL in this issue). Air conditioning for the terminal is in the final stages of installation and only a few finishing touches remain to be done to the terminal construction.

During the first weeks of operation, a UTCC computer operator was on duty at EAT during the 00:00 hour to 06:00 hours shift Monday to Friday in order to assist users with any problems arising from the terminal move. In addition, the operator monitored the use of EAT to prevent $ACCT users from monopolizing EAT facilities and disrupting GPJS users.

This midnight shift was discontinued on November 28th since the terminal operation had stabilized and the volume of work done at EAT during this shift did not justify or necessitate an operator. In addition, software modifications were made which prevented the use of the EAT card readers by $ACCT users. It should be noted that $ACCT users may still use EUT during these hours.

As a result of the move, two services will be suspended between the 00:00 and 06:00 hours. Punched output will no longer be produced at this time and jobs routed to the LOCAL printer will not be available for pickup until 08:00 hours. Both of these services were rarely used during the midnight shift and their suspension should not inconvenience the users.

We hope that we have accomplished the move with minimal disruption to your computing and that the improved surroundings are worth any difficulties you may have encountered.

Don Gibson

UTCC RATE INCREASE

Following our recent announcement of the UTCC rate increase, we would like to advise individual academic and administrative users that departments received an equivalent increase in their computing budgets to cover the rate increase. Thus your volume of computing should not be affected by our change.

Your Customer Service representative will be happy to provide additional information on this or any other aspect of UTCC services. Please feel free to phone Bill Foster, Customer Service Group, at 978-6021 if you have further questions.

Bert McNeil

DO YOU HAVE A MAILING COMING UP?

UTCC'S MAILING LABEL PACKAGES CAN SPEED UP THE PROCESS FOR YOU

For further information,
call UTCC's Customer Service Group
at 978-6021

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computer centre

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https://archive.org/details/computernewsnove153jane

CARD READERS AND THE ENGINEERING ANNEX TERMINAL

On October 29th, the old Sandford Fleming Terminal (SFT) equipment was moved to its new location in the Engineering Annex Terminal (EAT). According to plan, the Documation 6501 was to become the primary reader for self-service. During the past month, it has become apparent that the Documation 6501, as delivered, is not capable of performing this task unassisted.

The Documation 6501 made its first appearance in SFT/EAT in the middle of August for a thirty day trial period. During this time period, the reader performed to specifications and in fact was preferred by some users. There were some minor complaints, the primary one being that users were encountering difficulties when reading in large decks of cards.

When the Documation 6501 became the sole reader after the move, more serious problems began to arise. The problems seem to have been caused, or at least made apparent, by heavier usage. It also appears that as long as the Documation 6501 and IBM 2501 were operating side by side in SFT, users who encountered problems on the Documation 6501 simply switched back to the IBM 2501.

The cause of the problems has been traced to the feed and stacker mechanisms of the reader. The distributer has agreed that there is a fault in the casting of the card path and has admitted that the Documation 6501´s performance is not up to standard. Consequently, he has agreed to repair the fault.

UTCC´s reaction to the problem has been to cancel the scheduled delivery of the second Documation 6501 for EAT. In addition, we have found an unsupported, though workable, means of placing an IBM 2501 Reader into the terminal. Originally, and according to IBM specifications, we did not believe that it was possible to support an IBM 2501 Reader in the EAT configuration.

We apologize for the inconvenience encountered by our users. We trust that with the IBM 2501 and a functional Documation 6501, UTCC will be able to meet its users´ needs.

Don Gibson

GUIDE 45

Two members of UTCC recently attended the 45th semi-annual General Meeting of Guide in Atlanta, Georgia. They were Paul Roth of Programming Services and Kurtis Bishop of Customer Services.

Guide is a non-profit association comprised of EDP users who have installed large-scale IBM computers. As such, Guide is not an IBM organization but a forum for users operating in similar environments. Its main purposes are to exchange and disseminate information of mutual interest and value, and to promote sound and professional EDP practices. Approximately 4500 representatives, primarily from North American installations, attended this general meeting.

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GUIDE 45 cont´d

The UTCC representatives attended sessions mostly in Applications Systems, Languages and Standards, and Management and Administration. In addition, they attended those sessions in other Guide divisions applicable to their interests and experience - particularly those concerning current "hot topics" in the computer industry.

At an early project meeting, there was a good description of the implementation of Improved Programming Techniques (IPT´s) at the Bank of Montreal. Mr. Harker, Vice President of Information Processing at the bank, discussed how they were able to substantially reduce maintenance costs, testing costs, and improve cumbersome communication and documentation processes by using some of the current programming and design techniques. These included: structured design, structured programming, pseudo code, program libraries, structured walkthroughs, and structured documentation. Of particular interest were some of the statistics used to compare the development of two different phases of the system - one using standard techniques and the other using IPT´s. In all development steps - analysis, design, and implementation - the use of IPT´s resulted in a significant increase in both productivity and quality of results.

An open discussion of current design and programming techniques occurred at a later session. The techniques discussed were those of Yourdan Warnier, and IBM (HIPO). Discussion centred around the "Data Flow" approach of Yourdan (refer to the article, STRUCTURED PROGRAMMING in the October issue of COMPUTERNEWS) and the "Data Structure" approach of Warnier. Basically, the Warnier approach seeks to model the program structure after that of the data. It was suggested that the Yourdan approach was most applicable at the system design level while the Warnier approach was most applicable at the individual module level. Roger Van Ghent, of the Chase Manhattan Bank, described how a marriage of the two methodologies resulted in what he felt was the optimum approach.

An interesting speech was given near the end of the week by Mr. Charles P. Lecht of Advanced Computer Techniques Corporation. He discussed the technical, sociological and political factors which will influence EDP in the near future and in the long run. He predicted that the amazing technological advancements which have occurred in the past ten years within the computing field will continue to accelerate. He cited the manufacture of the bubble memory and the development of fibre optics as examples of technological improvements that will be contributing factors. He was less optimistic, however, when he spoke about government intervention in the computer industry. He described how government regulations were already inhibiting technological advancement and suggested that political factors could have a crippling effect on the future of data processing. Also, a somewhat disturbing prediction was that by 1990 no new development programming will occur - we will be too busy maintaining existing systems.

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GUIDE 45 cont´d

Overall, Guide 45 was extremely informative. The excellent choice of subjects, the many opportunities for informal discussion of problems, and the interchange of information were invaluable to all who participated.

Kurtis Bishop

ACM SIGUCC USER SERVICE CONFERENCE

The 5th ACM SIGUCC User Services Conference was held in Kansas City, November 6-9, 1977. Sessions dealt primarily with the problems many user service groups face - how to properly meet the needs of each user, what kind of services should be provided, and how these services should be provided.

User services is usually the first contact a user has with a computer centre. In most instances, it is his only contact. As a result, the primary goal of a user services group must be to provide optimal service to the entire user and potential user community.

One session, "Internal Communications for External Results", stated that the quality of service and information that a computer centre provides to its users depends largely upon the quality of communications among computer centre staff. Communication difficulties can be further complicated by the fact that a computer centre´s total community embraces such a wide assortment of people. To communicate effectively in such a diverse environment, the quality of communication within the particular computer centre must be analyzed. Questions, such as those listed below, must be dealt with.

1. Are there known procedures for reporting user problems, system problems, any problems?

2. Are there known procedures for recording trouble reports? Is every staff member aware of each procedure?

3. When modifications to a piece of software are made are staff members made aware of this?

Service organizations these days are subject to increasing pressure to view themselves as sales organizations. This has led to the launching of marketing efforts within computer centres. Unfortunately, the terms marketing and sales often have negative connotations, particularly in a university environment. However, when such connotations are removed, marketing and sales typically mean the provision of superior service at minimum cost combined with a campaign to educate the potential user community.

The session entitled ´Promotion and Marketing of Computing, Expanding the User Base,´ dealt with this topic. The speaker discussed the requirements for a successful marketing effort, how to effectively plan a promotional effort and how to implement the promotional plan.

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ACM SIGUCC USER cont´d

While the problem of educating the user community is a concern of a university marketing group, the actual planning and implementation of this effort are mainly carried out by other members of a user services group. Education in its broadest sense is a concern not only of people teaching computer short courses but also of those who are involved in communicating instructions on how to use a centre´s services (for example, technical writers, editors and program advisors).

The first thing a potential or novice user needs to know, however, is how to get started. The most efficient way of handling this breaking-in phase is still a good short course program. In the session called ´Educational Responsibilities of Users Services´, Georgia State University talked about their efforts to establish and maintain credibility in this area. Like most universities, they are faced with the plight of how to perform efficiently with very limited resources. Six years of grappling with the problem have led them to seek a reasonable set of standards which were passed on at the session. These include the utilization of those staff members who are most enthusiastic about this project, allowing adequate preparation time, training and practice opportunities for instructors, good pre-course publicity, registration, formal feedback from attendees and the collection of all course materials in a central depository for future use.

Another method of education growing in popularity is the use of video instruction. Course sets may be purchased from commercial outlets or produced locally by a user services drawing on expertise from other departments on campus. One such effort was demonstrated in the session, ´Video Tape for User Education.´ Two people from the University of Mississippi, one from the computer centre and the other from the media centre, gave the audience "A View From Both Sides of the Camera" (paper by David Sieg and Whit Crowley). They showed a very professional looking sample of what could be accomplished by various camera techniques, graphics displays and colour. Script and actors (staff members) are supplied by the computer centre. The remainder of the session dealt with considerations for the selection of commercially produced video courses based on investigations made by the University of Iowa. Their experience has been that the video course method is superior to that of short courses except in cases where the video type is not available for certain topics.

User education, however, cannot depend on such verbal means of instruction and must be continually supplemented and extended by good written documentation. Achieving this depends, first of all, on the close co-operation of two groups with a history of opposing views; that is, programmers and technical writers. The session, ´Documentation: Quality and Style´, attempted to define the terms of its title. The concensus of opinion was that quality and style are the product of technical accuracy delivered in terminology that can be understood by the level of use for which it is written.

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ACM SIGUCC USER cont´d

This session ended with a lively airing of viewpoints (and hostilities) among attendees representing these two groups. The solution became apparent, however: a little compassion on the part of the programmer for the novice user recipient of technical instruction and a willingness on the part of the technical editor to recognize the necessity for understanding what a programmer´s instructions mean before he/she sets about clarifying meaning.

As users move further away physically from the computer with the trend towards networks with its latest facilities for remote access, these methods of instruction give way to another medium, the computer itself. Several papers were delivered at the session ("Use of the Computer in Delivering Users Services: Online Aids") by representatives of those universities who are involved in methods for more effective communications with its users. New Mexico State University explained the workings of their OLDS (On Line Documentation System). This discussion included the layout of the documents themselves, methods of accessing whole or parts of a document, facilities for hard copy and monitoring of usage for maintenance purposes. A consultant from Stanford talked about the ways in which certain problems that arise from telephone and in-person advising can be overcome through the use of the many electronic mail systems currently under development.

A similar idea was forwarded by the Instruction and Research Co-ordinator at the University of Louisville. By taking the DECUS Program Libbary information system, AVAIL, and modifying it to allow user feedback, they have provided a means for allowing users to pass on information and problems to each other.

Many other excellent papers were submitted containing ideas to help ACM installation members cope with the changing demands placed on those groups faced with the responsibility of providing quality services to its users. A copy of these proceedings is now available for reference in the Information Office, Room 206, Engineering Annex, 978-4990.

Ruth Borenstein &
Marg Doherty

P.S. ... P.S. ... P.S. ...
PERSONAL COMPUTERS

One of the busiest areas of the recent Canadian Computer Show was the Personal Computer Showplace. Interest in small general purpose computers has grown tremendously in the last two or three years and the end is not in sight.

A wide variety of hardware is available, ranging from basic components for the dedicated do-it-yourselfer to fully assembled equipment with a wide range of features.

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P.S. ... PERSONAL cont'd

There is a corresponding range of software available, reflecting the wide interests of the hobby computer user: Assemblers, basic compilers, menu planning and kitchen management programs, personal finance packages, book-keeping/payroll systems, games and energy management systems. Several computer stores have opened to sell this equipment to the public. As well, several magazines are published which are concerned exclusively with personal and hobby computing.

Although the future impact of small computers is not clear, some trends are discernible. The equipment will become less expensive - some people predict that equipment costing $4000 now will sell for $100 by 1985. Thus the equipment will be economically accessible and useful to more people with small applications. The large scale computer may occupy a smaller proportion of the computer market. Computing and computers will continue to change dramatically in the coming years.

Sally Holton

THE 9TH UNIVERSITIES COMPUTING CONFERENCE

From July 21 to July 23, 1978, Carleton University will be hosting the Ontario Universities Computing Conference. One of the current interests within the computing field is time-sharing. Time-sharing services are increasingly being offered in addition to or instead of the batch processing mode of operation. The impact of time-sharing on the computer environment has determined the theme for next year's Conference; that is, "Time-sharing and Interactive Computing in the University Environment". At this time, the Program Committee is calling for papers pertaining to this theme. Although prospective participants are not limited as to the choice of topic, the Program Committee has identified several areas of possible interest. The suggested subjects are: the academic applications of time-sharing, the use of interactive computing to solve administrative problems, user services, planning and development of systems, and management of resources.

Papers are solicited from all members of the university and college community. Papers will be selected from abstracts (two to three pages single spaced), which must be submitted by January 15, 1978 to:

Program Committee
9th OUCC
Computing Services
Room 401 Administrative Bldg.
Carleton University
Ottawa, Ontario
K1S 5B6

Notification of acceptance or otherwise will be given by March 1, 1978.

UNIVERSITY OF TORONTO COMPUTER CENTRE

CHRISTMAS & NEW YEAR HOLIDAY SCHEDULE

	23 Fri	24 Sat	25 Sun	26 Mon	27 Tue	28 Wed	29 Thu	30 Fri	31 Sat	1 Sun	2 Mon	3 Tue
TECHNICAL REF. LIBRARY	N	X	X	X	X	X	X	X	X	X	X	N
INFORMATION OFFICE	N	X	X	X	X	X	X	X	X	X	X	N
ADMINISTRATION OFFICE	N	X	X	X	X	X	X	X	X	X	X	N
ACCOUNTING OFFICE	N	X	X	X	X	X	X	X	X	X	X	N
DATATALK	N	X	X	X	X	X	X	X	X	X	X	N
S/370 ADVISING OFFICE	N	X	X	X	X	X	X	X	X	X	X	N
S/360 OFFICES	N	X	X	X	X	X	X	X	X	X	X	N
S/360 FACILITIES	N	UO	UO	UO	SS*	SS*	SS*	SS*	UO	UO	UO	N
S/370 OFFICES	N	X	X	X	X	X	X	X	X	X	X	N
S/370 FACILITIES	N	X	X	X	SS	SS	SS	SS	X	X	X	N
CRF OFFICES	N	X	X	X	X	X	X	X	X	X	X	N
CRF FACILITIES	N	X^K	X^K	X^K	X^K	X^K	X^K	X^K	X^K	X^K	X^K	N

X	closed
UO	Unattended Operation
SS	Single Shift 9am - 5pm
N	Normal Hours of Service

^{K}CRF facilities will be open to Keyholders as usual.

*S/360 will be running unattended after 5pm. Service may be interrupted during UO for brief periods to perform system backups etc.

Access to EUT, EAT, Keypunch and terminal facilities in the Engineering Annex Bldg. will be available at hours when the S/360-165-II is scheduled for operation. Users of other terminal sites should watch for signs or check with their Computing Co-ordinator.

DECUS PROGRAM LIBRARY

Digital Equipment Corporation Users Society (DECUS), of which UTCC will be a member, was formed for the purpose of advancing the effective use of DEC computing systems by promoting the exchange of information among its users. Specific objectives of this group are mutual education, interchange of ideas through established standards of communication and also to provide feedback on user equipment and programming needs to the manufacturer.

One of the major responsibilities that has evolved from these objectives is the maintenance of a formal system of program exchange, the "DECUS Program Library". This library consists of a collection of program packages submitted by DECUS members and is made available to other members for a handling charge only. All programs are distributed "as is"; DEC takes no responsibility for generating or testing these packages. If a program in the DECUS Program Library does not work as stated, the author is notified and the program is removed from the library.

UTCC is currently arranging to obtain the complete DEC 10 section of this library and will make individual programs available to its users upon request. A catalogue of programs with abstracts may be referenced in the Information Office, Room 206, Engineering Annex. Programs are listed under the following categories:

I Programming Language, Monitor, Programming System

II Text Editing, Text Manipulation

III Debugging, Disassembly, Simulation, Trace, Dump

IV Binary Loading, Binary Punching

V Duplication, Verification

VI Numerical Function, Numerical Input/Output

VII Utility

VIII Display (none)

IX Data Management, Symbolic Manipulation, Sorting

X Probability, Statistics, Curve Fitting

XI Scientific Application, Engineering Application

XII Hardware Control

XIII Game Demonstration

XIV Plotting

XV Desk Calculator, Business Application

XVI Maintenance

XVII Miscellanous

Marg Doherty

CHANGES IN ASSEMBLER SUPPORT

UTCC is updating its support for the ASSEMBLER language. Both ASSEMBLER and JCL procedures are being revised. The old ASSEMBLER procedures will be deleted on December 21, 1977 and the procedures documented in USERBOOK will be the only acceptable ones.

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CHANGES IN ASSEMBLER cont´d

The old and current procedures are summarized below:

Old Procedures	Current Procedures
ASMFLDGO	ASMGO
ASMFORTG	ASM, then FORTGO
ASMGC	ASM, LEVEL=G
ASMGCL	ASMLE, LEVEL=G
ASMGCLG	ASMLEGO,LEVEL=G

UTCC is installing the latest release of ASSEMBLER G and the parameter string is not fully compatible. Differences will be detailed in an update to USERBOOK.

Jim Heifetz

WYLBUR WORDS

Updates to WLIBLIST

The WLIBLIST program, which previously could be used only to list a WYLBUR library or card-image library, has been extended to handle Variable Blocked datasets and to allow fixed-length libraries with more than 80 columns. Also, the program now saves paper in that it does not print each member on a separate page. This can be overridden by specifying ´NOECOL´ option on the EXEC statement.

The WYLBUR Reference Manual

The WYLBUR Reference Manual underwent several changes in October. A user holding a version dated prior to October 1, 1977, can obtain the current edition at the Information Office.

This is probably the last set of major changes before we upgrade to the MVS version of WYLBUR, which requires several changes throughout. At that time, The WYLBUR Reference Manual will be sent to a commercial printer, and all MVT copies will be ´recalled´.

Ian Darwin

SCRATCH TAPE USAGE

Many applications require a great deal of temporary work space; often this space is not available on the UTCC scratch pack. Consequently, the user may be forced to consider the use of intermediate work datasets on magnetic tape. "Scratch" tapes are those which the user does not rent on a long-term basis. They are provided by the system for use within a single batch job only. Their major advantage is that the user need not keep track of "volume serial" numbers. Further, the occasional tape user is spared the expense of renting tapes on a monthly basis. Scratch tapes are easy to use as the system handles many operations for the user. However, the documentation for scratch tapes, which is contained in several IBM publications, is rather unclear. This article is intended as a brief and simple introduction to scratch tape usage at UTCC.

When using any tape, the control statement, /*SETUP, must appear in the JCL. The /*SETUP statement is fully described in the USERBOOK module 3.3BATCH. Generally the user is only dealing with one scratch tape. In this case, the user only needs to code the following:

cont´d...

SCRATCH TAPE USAGE cont´d

```
/*SETUP  UNIT=3400-5,VOL=(EXT=SCRTCH,W)
```

Remember that the user need not be concerned with a volume serial number. For example, suppose the user is writing three work files on a single scratch tape. In this instance, the JCL is as follows:

```
//S1 EXEC PGM=MYPROG

//T01 DD DISP=(NEW,PASS),UNIT=3400-5,
//    DSN=&FILE1,LABEL=(1,SL)
//T02 DD DISP=(NEW,PASS),UNIT=3400-5,
//    DSN=&FILE2,LABEL=(2,SL),
//    VOL=REF=*.T01
//T03 DD DISP=(NEW,PASS),UNIT=3400-5,
//    DSN=&FILE3,LABEL=(3,SL),
//    VOL=REF=*.T01
```

It should be noted that the VOL=REF=*.T01 parameter will work even though the user does not know the specific volume serial number of the tape being used. Also, this type of work dataset can be useful when dealing with variable type records which have blocksizes greater than 13030 bytes (i.e. the maximum track capacity of a 3330 disk drive).

Herb Kugel (phone 978-7286) is available to answer questions concerning this article.

Herb Kugel

´PATHOLNGICAL´ INPUT/OUTPUT ... A REMINDER

A ´pathological format´ is one which cannot be processed ´as is´ using the standard S/360-65 and S/370-165-II access methods. Occasionally users must supply magnetic tapes which require the use of a pathological format and receive tapes which are written in this format.

UTCC has a series of specialized ´exotic´ Input/Output routines which have proven to be very helpful in situations involving the application of a pathological format. Users encountering difficulities with respect to the use of the pathological format, should contact Herb Kugel (phone 978-7286).

Herb Kugel

VARIABLE BLOCKSIZE HELP AVAILABLE

Many UTCC users receive data tapes in V (or Variable) type format from other installations. As these tapes are often received from government installations, the data is quite significant.

The blocksize on these tapes is quite large (frequently around 32K bytes). The data cannot easily reside on an online user 3330 disk pack as the latter has a maximum track capacity of 13030 bytes. Also, the core needed for buffers makes processing quite expensive.

UTCC has several ´exotic´ special purpose routines to change the blocksize on the data, usually without affecting the logical record length. These routines are being documented for USERBOOK. In the meantime, users in possession of such tapes, who have questions concerning the several options for conversion, should contact Herb Kugel (phone 978-7286).

Herb Kugel

ERRATUM

High Speed Job Stream users should note the following correction to the article SUMMARY OF HSJS CHANGES which appeared in last month's issue of COMPUTERNEWS. Point 1 in the WATFIV section of the article should read:

1. The $JOB card is free format. Example:

```
$JOBW ID='MY NAME',LIBLIST,T=3,P=10
```

We apologize for any inconvenience to our users.

Janet Campbell

THE WORLD COMPUTER CHESS CHAMPIONSHIP

Editor's Note: The following article is reprinted from the October 1977 issue of the Ryerson Computing Centre Newsletter.

The Toronto II Room of the Hotel Toronto, normally a setting for testimonial suppers or award banquets, saw a gathering of an altogether different sort this August. The occasion was the World Computer Chess Championships, part of the proceedings of the mammoth IFIP (International Federation for Information Processing) Congress 77 which the city of Toronto hosted this year.

Sixteen chess programs from across the globe participated in the tournament, including KAISSA, the defending champion from the U.S.S.R. The standard international system of competition was used, a type of round-robin in which each contestant played four games. Each win counted for one point, each draw for half of a point and each loss for no points, with the winner being decided by its total. Play was distributed over three days - two games on the opening Sunday and one game on each of the two following evenings. Spectator attendance was excellent throughout the competition. On the final evening, the room was packed to such an extent by aficionados and the curious that the management had to close the doors. It was observed that on the occasion there were at least twice as many people in attendance as the spectators that came to watch Bobby Fisher retain his last U.S. Chess Championship. In the gallery, the atmosphere was one of amazement and unwavering attention as criticisms and words of praise in a dozen different languages passed back and forth. In my section, I was quickly drawn into conversation with two elderly foreign gentlemen about the progress of a game close to us. They put me to shame with their knowledge of chess trivia and tactics. Upon learning that they were novices as far as computers were concerned, however, I was able to dazzle them with my repertoire of facts, mostly gathered during research, on an earlier Newsletter article on Computer Chess(April 1977).

cont'd...

WORLD COMPUTER CHESS cont´d

The crowd was able to keep track of the progress in the various games by means of eight large, magnetic chess boards raised on a platform at the front of the hall. On the floor in front of them sat the contestants - or rather their teams of agents and authors. Each pair of competing teams occupied one table. In many cases one man from each side faced one another across a chess board, lost in deep thought as if they, not the machines, were making the decisions. Some insisted that this gave them a better perspective, allowing them to more accurately gauge the performance of their respective programs. Each table also held the myriad display screens, terminals and modems which were hooked up by telephones to the individual computers into which the chess programs had been placed for the tournament.

Much of the computer time for the programs was provided free of charge by various installations and companies in the region. One representative from a participating computer firm was running back and forth to make telephone calls. The program that his company was hosting already had 95% of an IBM 370-168 dedicated to it, and the competing programmer was hollering for, "more, more". That program placed next to last in the tournament.

The nature of the contestants made silence unnecessary, a fact obvious from the din being generated by the crowd and the media covering the event. The tournament sponsors were therefore able to provide a combination master of ceremonies/commentator. Throughout the competition, British chess expert David Levy paraded back and forth along the platform microphone in hand, providing explanations, comments and predictions about the ongoing games. He was also quick to provide unorthodox criticism of the somewhat unorthodox moves which some programs produced from time to time.

Long a follower of the growth of computer chess, Mr. Levy told the audience that, despite the obvious flaws that many programs displayed, he was impressed by the quality of play. He went so far as to predict that in ten years, computers would be providing the most superior level of chess competition available in the world.

The eventual winner of the tournament was Chess 4.6 from Northwestern University in Illinois, runner-up in the previous championship. It was the competition´s only undefeated or untied program, finishing one point ahead of its arch-rival, KAISSA.

The Russians had problems from the start, losing their opening game to a not particularly strong program. Rumours circulated, attributing the loss to everything from a transient bug in the program to the less than usual style of play produced by the opponent. Whatever the cause, KAISSA won the remainder of its games but had to settle for second place. Arguments over which was really the more superior program, Chess 4.6 or KAISSA, were rampant, since the two did not play one another during competition. The matter was settled by an exhibition game where, for the first time, Chess 4.6 managed to beat the Russians.

cont´d...

WORLD COMPUTER CHESS cont´d

It is impossible to deny the impressive quality of Chess 4.6´s play. It is already able to beat 99.5% of all competing players in the U.S. Chess Federation and throughout the tournament showed flawless offensive strategy combined with excellent, almost impenetrable defence. It has those openings which experts consider to be the best pre-programmed into it. Its middle game is solid, with good scheduling of priorities which prevent the abandoning of a superior position in order to pursue some less desirable goal. Finally, its endgame (traditionally the weak area of play by computers) is methodical, cautious and effective. It also possesses the valuable trait of being able to "think" during its opponent´s time-frame, calculating the most likely move for its competitor and projecting accordingly. Since a time limit for total processing was in effect for the championship, this gave Chess 4.6 a decided edge.

One of the highlights of the competition was the appearance of Dr. Mikhail Botvinnik on the final evening of tournament play. As well as being a professor of Electrical Engineering at Moscow University and a pioneer of computer chess, Dr. Botvinnik was the world chess champion for twelve successive years. David Levy jokingly explained the use of the "French Defence" by Chess 4.6 in its final game as a tribute to the presence of the old master, since it had always been one of Botvinnik´s favorites during his years as an active player.

D. Dowhal

NOTE:

The summary charts associated with "The World Computer Chess Championship" appear on pages 17 and 18.

PERSONNEL CHANGES

Leaving the Centre this month is Jim Peacock. Jim has taken a position in industry. Best of luck Jim.

Joining us this month are Ken Chamberlain and Paul Shindman. Ken is a new programmer in the Accounting Section of the Administration Office, and Paul is a new computer operator at the Engineering Annex Terminal in the Services area. Welcome aboard.

Clara Silva

IFIP CONGRESS 77

TECHNICAL DETAILS ON PARTICIPANTS
SECOND WORLD COMPUTER CHAMPIONSHIP

PROGRAM	PROGRAMMING LANGUAGE	SIZE OF OPENING BOOK	PROGRAM SIZE (MEMORY)	AVERAGE NUMBER OF POSITIONS EXAMINED PER MOVE
1. KAISSA	Assembly	10,000 positions	250K	90,000
2. CHESS 4.6	Assembly	5,600 positions	7.5 K words (60 - bit) + Ext. Core	400,000
3. BLITZ V	FORTRAN IV	5,000 positions	24K words (32 - bit)	500
4. MASTER	PL/I	450 variations	170K	100,000
5. TELL	Algol 60		15K words (36 - bit)	
6. DUCHESS	PL/I and Assembly	3,000 positions	300K	1,200
7. BELLE	"C"	10,000 positions	8K words (16 - bit)	30,000
8. WITA	Algol W	9,000 positions	350K	250
9. OSTRICH	Assembly	no book	20K words (16 - bit)	10,000
10. DARK HORSE	Fortran IV	no book	20K words (60 - bit)	12,000
11. BCP	Fortran and Assembly	1,000 positions	24K words (60 - bit)	1,000 per second
12. BS´66´76	Fortran	1,000 positions	200K	150
13. ELSA	Assembly	500 positions	100K words (48 - bit)	
14. CHAOS	Fortran	7,500 positions	3 Megabytes	30,000
15. BLACK KNIGHT	Fortran	70,000 positions	30K words (36 - bit)	7,500
16. CHUTE 1.2	BPL (extended XPL)	45 variations	250K	900

IFIP CONGRESS 77
PARTICIPANTS IN SECOND WORLD COMPUTER CHESS CHAMPIONSHIPS - TORONTO AUGUST 1977

PROGRAM	AUTHORS	AFFILIATION	COMPUTER	LOCATION OF COMPUTER
1. KAISSA	Dr. M.V. Donskoy Dr. V. Arlazarov	Institute for System Studies Moscow, USSR	IBM 370/168	Canada Systems Group Toronto, Ontario, Canada
2. CHESS 4.6	David Slate Larry Atkin	Northwestern University Evanston, Illinois, USA	CDC CYBER 176	Arden Mills, Minnesota, USA
3. BLITZ V	Robert Hyatt	University of Southern Mississippi Hattiesburg, Mississippi, USA	SIGMA 9	University of Southern Mississippi Hattiesburg, Mississippi
4. MASTER	J.A. Birmingham Peter Kent	Rutherford Lab and AERE Harwell, Oxfordshire, U.K.	IBM 370/168	AERE Harwell, U.K. (via I.P. Sharp Assoc.)
5. TELL	Johann Joss	Eidgenossische Technische Hochschule, Zurich, Switzerland	DEC K110	Dataline Systems Toronto, Ontario, Canada
6. DUCHESS	Tom Truscott Bruce Wright Eric Jansen	Duke University Durham, N.C., USA	IBM 370/165	Triangle Universities Computer Centre Triangle Park, N.C., USA
7. BELLE	Ken Thompson Joe Condon	Bell Telephone Labs Murray Hill, New Jersey, USA	PDP-11	Bell Telephone Labs Murray Hill, New Jersey, USA
8. WITA	Tony Marsland	University of Alberta Edmonton, Alberta, Canada	AMDAHL 470 V/6	University of Alberta Edmonton, Alberta, Canada
9. OSTRICH	Monty Newborn George Arnold	McGill University Montreal, Quebec, Canada	SUPERNOVA	At tournament site (via Data General)
10. DARK HORSE	Ulf Rathsman	Telefon AB LM Ericsson Stockholm, Sweden	CDC 6600	Multiple Access Computer Group Toronto, Ontario, Canada
11. BCP	Don Beal	Queen Mary College London, England	CDC 6400	McMaster University Hamilton, Ontario, Canada
12. BS'66'76	Barend Swets	Private entry Tilburg, Netherlands	IBM 370/168	Datacrown Limited Toronto, Ontario, Canada
13. ELSA	Ludwig Zagler	Technischen Universitat Munchen Munich, West Germany	Telefunken TR 440	Techn. Univ. Munich Munich, West Germany (via I.P. Sharp Assoc.)
14. CHAOS	Mike Alexander T. McBride Fred Swartz Bill Toikka Vic Berman Joe Winograd	University of Michigan Ann Arbor, Michigan, USA	AMDAHL 470 V/8	Amdahl Corporation Sunnyvale, California, USA
15. BLACK KNIGHT	Ken Sogge Fred Prouse Gary Maltzen Lonny Lebahn Elliot Adams	Sperry Univac St. Paul, Minnesota, USA	UNIVAC 1110	Sperry Univac Roseville St. Paul, Minnesota, USA
16. CHUTE 1.2	Mike Valenti Zvonko Vranesic	University of Toronto Toronto, Ontario, Canada	AMDAHL 470 V/6	Industrial Life - Technical Services (I.S.T.) Montreal, Quebec, Canada

RECENT ACQUISITIONS IN THE DEPARTMENT OF COMPUTER SCIENCE LIBRARY

Hall, G. and Watt, J.M.
  Modern numerical methods for
  ordinary differential equations
Oxford, Clarendon Press, 1976

Halstead, Maurice Howard
  Elements of software science
New York, Elsevier, 1977

IBM Symposium on Mathematical
Foundations of Computer Science,
1st, Amagi Homestead, Japan, 1976
  The theory of programs and its
  surroundings
Tokyo, IBM Japan, 1976

Liu, Chung Laung
  Elements of discrete mathematics
New York, McGraw-Hill, 1977

Sacerdoti, Earl D.
  A structure for plans and behavior
New York, Elsevier, 1977

Sussman, Gerald Jay
  A computer model of skill
  acquisition
New York, American Elsevier, 1975

Temes, Gabor C. and LaPatra, J.W.
  Introduction to circuit synthesis
  and design
New York, McGraw-Hill, 1977

UTCC SYSTEMS

SYSTEM/370 MODEL 165-II

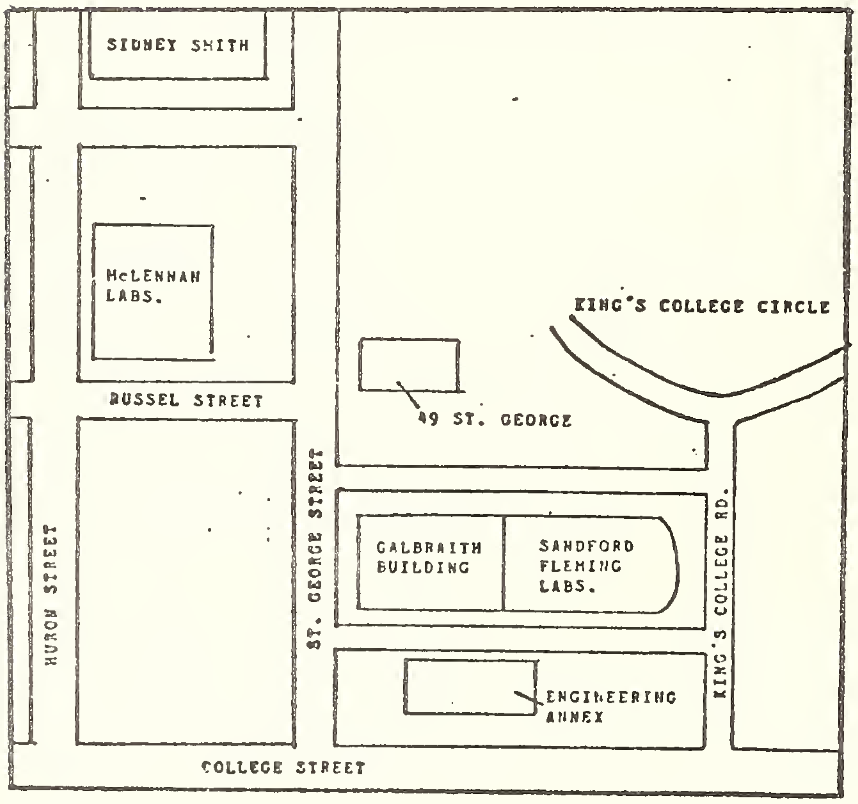
- located in SF103/105/112
- provides General Purpose Job Stream, High Speed Job Stream, TSO, WYLBUR
- 4 megabytes of memory
- OS/MVT with HASP

SYSTEM/360 MODEL 65

- located in McLennan Physical Laboratories
- provides APL and ATS services
- 1536K bytes of core
- OS/MVT with APL and ATS

COMPUTER RESEARCH FACILITY

- located in SF207
- DEC GT44 System with PDP-11/40 CPU
- DEC GT40 System with PDP-11/05CPU .
- provides specialized graphics and interactive graphics
- provides on-line and real-time computing services, data acquisition and minicomputer services



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ACTING DIRECTOR

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Marg Doherty	EA206	8995

MANAGER, SERVICES

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INFORMATION SERVICES

Don Gibson	EA206	5568

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Bill Foster	SG301	6021

SUPERVISOR, PROGRAMMING SERVICES

Helen Peacock	SG201	6877

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Ralph Lombardi	SG305	7130

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Bob Chambers	NP1201	8823

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Dave Wong (S/370-155)		6864

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Eugene Siciunas	EA206	4967

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LAB CO-ORDINATOR (CRF)

Krishna Patnaik	SF207	4086

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Sylvia May	EA206	7148
Merton Hunte	EA206	8702

ACCESS CODES

Gail Cavers	EA206	8703

MANAGER, INFORMATION SYSTEMS

Sean Keeley		3579

NOTE:

EA = Engineering Annex
SF = Sandford Fleming
SG = 49 St. George
NP = McLennan Physical (New Physics)
SS = Sydney Smith

JOB AND SYSTEM STATUS QUERIES

SYSTEM/370,TSO	7373
ATS/APL	6234
2741 TERMINAL MALFUNCTIONS	7107
029 KEYPUNCH MALFUNCTIONS	6465

SERVICES

	DIAL-UP	ADVICE
APL - 2741	7200	6710
APL(ASCII	7200	6710
ATS	7100	7107
TSO - 2741	7303	8599
TSO - TTY (10 cps)	7390	8599
TSO - TTY (30 cps)	7386	8599
DATATALK	6710	6710
WYLBUR	7235(EBCDIC) 3950(ASCII) CENTREX 3954(ASCII) NON CENTREX	8599

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